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Secretary for  
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## Department of Toxic Substances Control

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Edmund G. Brown Jr.  
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July 28, 2016

Ms. Penny Newman  
Center for Community Action and Environmental Justice  
P.O. Box 33124  
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### COMMENTS AND CONCERNS REGARDING AIR MONITORING-RIVERSIDE AGRICULTURAL PARK, 7020 CREST AVENUE, RIVERSIDE, CALIFORNIA

Dear Ms. Newman:

On June 16<sup>th</sup> 2016, the California Department of Toxic Substances Control (DTSC) received a letter from the Center for Community Action and Environmental Justice (CCA EJ) regarding air monitoring at the Riverside Agricultural Park, 7020 Crest Avenue, Riverside, California. Because the topics for some of the comments overlap, DTSC's responses are grouped by common topics as follows:

#### **DTSC Response to Comments #1 through #5:**

##### *Overview of Previous Site Remediation Activities*

In July of 2006, Frey Environmental (Frey) prepared a *Revised Response Plan, Excavation of Soils Containing PCBs* (Response Plan) dated July 20, 2006. The Response Plan described the procedures and practices to conduct additional assessment activities and remove and dispose of soils which contain chemicals of concern, including polychlorinated biphenyls (PCBs), from the Riverside Agricultural Park. In consideration of the intended development of the property for residential purposes, a target remediation goal of 0.22 milligrams per kilogram (mg/kg), equivalent to 0.22 parts per million, was established for PCBs. Site remediation activities, including excavation, removal and disposal of soil, were performed in two separate phases to date, as described below:

- **Phase 1 Removal Activities**-The Phase 1 Removal Activities were performed between April 29 and July 14, 2009, and targeted removal of soil containing PCB concentrations greater than 50 mg/kg. A total of approximately 8,666 tons of PCB and/or metals-impacted soil were transported off-site during the Phase 1 remediation activities.

- Phase 2 Removal Activities-Phase 2 Removal Activities were completed between July 12, 2013 and January 30, 2014 and included excavation, removal, and disposal of soil containing PCB concentrations in excess of 0.22 mg/kg. Approximately 165,227 tons of soil was removed during the Phase 2 remediation activities.

A Workplan for Air Monitoring was included in Appendix E of the 2006 Response Plan, and was followed during both Phase 1 and Phase 2 removal activities. The current Air Monitoring Plan Addendum has been prepared for the upcoming Phase 3 cleanup to address residual PCB contamination present at select locations of the property. The draft Addendum has been reviewed by DTSC, the U.S. Environmental Protection Agency (U.S. EPA), the California Environmental Protection Agency (Cal/EPA), and the South Coast Air Quality Management District (SCAQMD) and has incorporated all agency concerns. The final version will be approved by DTSC prior to implementation of the excavation.

#### *Dust Action Level*

For this project, a Community Action Level of  $7 \times 10^{-5}$  milligrams of PCBs per cubic meter of air ( $\text{mg}/\text{m}^3$ ) was selected, based on the non-cancer chronic ambient air value of  $7.3 \times 10^{-2}$  (or 0.073) micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) for PCBs from the U.S. EPA Preliminary Remediation Goals (PRGs; 2004). The use of the chronic air value as the Action Level for PCBs was highly protective of the surrounding community because the durations of the removal activities were only several months (two and six months for Phase 1 and 2, respectively) while U.S. EPA defines chronic exposure to be 7 years or longer when establishing the PRGs. A longer exposure time is generally associated with a lower number for an action level, so using a seven-year action level goal for an action that took less than six months is both conservative and protective. Additionally, the maximum concentration of PCBs detected in soil was conservatively used in the calculation of a health-based dust concentration limit (DCL), and the lower dust concentration limit of  $7 \mu\text{g}/\text{m}^3$  utilized during Phase 1 and Phase 2 removal activities reflected the highest PCB concentration (9,560 mg/kg) in soil that existed prior to the Phase 1 work. The higher dust action level for Phase III activities is reflective of the significant reduction in the maximum PCB concentration (500 mg/kg) in soil following the Phase 1 and Phase 2 soil removal efforts. The assumption that all the soil at the site was contaminated at the maximum concentration of 9,560 mg/kg, while untrue, was used in order to establish a clear worst-case scenario. All other measured concentrations of PCBs at the site were less than 9,560 mg/kg, and most were significantly lower. The intent of using a single maximum concentration to represent all other concentrations, even though it is not a true scenario, is to ensure an action level that is both conservative and protective.

Following the same methodology for dioxins, using the Community Action Level of  $7 \times 10^{-9}$  milligram per cubic meter ( $\text{mg}/\text{m}^3$ ) identified in Appendix E of the Response Plan and the highest dioxin concentration of 0.0084 mg/kg detected in soil, the health-based DCL for dioxins is approximately  $830 \mu\text{g}/\text{m}^3$ . Because the DCL for dioxins is higher than the DCLs for PCBs for the Phase 1 and 2 removal activities and for the upcoming Phase 3 cleanup, the Dust Action Levels selected for PCBs are protective for presence of dioxins in dust as well.

#### *Dust Monitoring*

Real-time dust monitoring was performed during Phase 1 and Phase 2 removal activities using Thermo-Scientific DataRAM 4000 particulate monitors. These monitors detect the presence of particulate matter with a mean particle diameter of 10 microns or less. The diameter of 10 microns or less is chosen because that is the particulate fraction that is considered to be respirable. At the beginning of each work day, the wind speed and wind direction were determined from the Davis Vantage Pro 2 Weather Station and a Kestrel 3000 pocket wind meter. One particulate monitor was installed on the site at a location upwind of the work area and another particulate monitor was installed downwind of the work area. In the event that the wind direction changed during the course of the day, the locations of the upwind and downwind monitors were adjusted accordingly.

In addition to continuously logging the particulate concentration in air, the monitors were manually checked on an hourly basis and data recorded in field data sheets. The water application rate and/or frequency were increased when the 1-hour difference between the upwind and downwind monitors was greater than the dust action level during Phase 1 and Phase 2 removal activities. As discussed in the Air Monitoring Plan Addendum, dust monitoring will be conducted using Met One Instruments E-BAM portable beta attenuation monitors during the Phase 3 removal activities. Additional information on dust control is discussed in the section below.

#### *Dust Control*

Construction activities, including excavation and soil loading, are capable of generating fugitive dust. However, fugitive dust generation can be minimized through the application of various control measures and work practices. In recognition of the potential for construction activities to generate fugitive dust, project-specific fugitive dust control measures were established. The fugitive dust control measures defined in the Response Plan are consistent with best available control measures and SCAQMD requirements for Rule 403 and included the application of water prior to excavation and at various times during the excavation activities.

As discussed in Appendix E of the Response Plan, exceedance of the dust action level would trigger additional watering or other appropriate control measures to reduce fugitive dust during remediation activities. The difference between upwind and downwind dust concentrations averaged over a one-hour monitoring period was

compared to the dust action level, and increases in the water application rate and/or frequency were implemented during Phase 1 and Phase 2 removal activities when the difference between upwind and downwind dust concentrations exceeded the dust action level. The same dust control measures will be implemented with dedicated DTSC staff overseeing dust monitoring during the upcoming Phase 3 cleanup.

It should be noted that the dust action level derived using the highest soil concentration detected at the site and the chronic reference exposure level for PCBs is highly conservative when considering average PCB levels and exposure lengths for the cleanup. Consequently, exceedance of the action level does not imply that elevated concentrations of PCBs are present in air (see the next section) nor suggest adverse health effects due to site-related activities; it is simply used as a decision point in the field for implementing enhanced control measures to reduce dust levels.

#### *Air Sampling and Analysis*

Air samples were collected throughout the Phase 1 and Phase 2 remediation activities. As indicated in Appendix E of the Response Plan, real-time monitors for PCBs were not available. Thus, the air sampling equipment was setup adjacent to the downwind dust monitoring point and air samples were collected over the duration of the day's activities; a period of approximately five to eight hours. Air sampling for PCBs was performed using a constant flow air sampling pump and a sample cassette consisting of a combination of glass fiber filter and solid sorbent (Florisil tube). In the event that the wind direction changed during the course of the day, the sampling locations were adjusted accordingly.

During the Phase 1 excavation activities, field activities were performed on 32 separate days between April 29 and July 14, 2009. Air samples were obtained for analysis of PCBs via NIOSH Method 5503 Modified on 30 of the 32 field days. PCBs were not detected above laboratory analytical detection limits in any of the 30 downwind air samples collected during Phase 1 remediation activities.

During the Phase 2 excavation, field activities were performed on 128 separate days between July 12, 2013 and January 30, 2014. A total of 54 daily air samples were obtained for analysis of PCBs via NIOSH Method 5503 Modified. The frequency of air sampling exceeded the frequency specified in the Response Plan. Specifically, air samples were collected daily during the first two weeks of excavation and twice a week thereafter. PCBs were not detected above laboratory analytical detection limits ( $0.000027$  to  $0.00055$  mg/m<sup>3</sup>) in any of the 54 downwind air samples collected during Phase 2 remediation activities. Thus, there were no PCBs detected in all 86 downwind air samples collected during the Phase 1 and Phase 2 excavation activities.

The complete laboratory reports for the Phase 1 and Phase 2 air samples are available on the DTSC Envirostor website

([http://www.envirostor.dtsc.ca.gov/public/profile\\_report.asp?global\\_id=33490087](http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=33490087)).

Because some of the laboratory detection limits for the Phase 1 and Phase 2 samples were elevated, a different analytical method with lower detection limits (U.S. EPA Air Method TO-10A) will be used in air sampling for the upcoming Phase 3 soil removal.

The consultant performing the work, TRC, did not perform analysis of personal exposure monitoring of contractor employees engaged in site activities as this responsibility rests with the contractor. By way of reference, the California Occupational Safety and Health Administration (CalOSHA) Permissible Exposure Limits (PEL) for PCBs range from 0.5 (Aroclor 1254) to 1.0 (Aroclor 1242)  $\text{mg}/\text{m}^3$ , and the CalOSHA PEL for nuisance particulates is 10  $\text{mg}/\text{m}^3$  (total dust). Conservatively assuming that PCBs were present in dust at the maximum concentration detected in soil and that the concentration of dust in air is equal to the nuisance particulate PEL for total dust, the maximum predicted PCB concentration in air would be 0.1  $\text{mg}/\text{m}^3$ . This value is well below the PCB PEL of 0.5-1.0  $\text{mg}/\text{m}^3$ , which means that the PCB PEL would not be exceeded when total dust concentrations meet the nuisance dust standard. Consequently, the nuisance dust PEL represents the primary occupational exposure standard for site workers.

Air sampling for dioxins (and furans) was contemplated in the Response Plan. However, at the established dust action level (7  $\mu\text{g}/\text{m}^3$ ) for the Phase 1 and Phase 2 cleanup, the maximum predicted concentration of dioxins in air would be  $5.9 \times 10^{-11}$   $\text{mg}/\text{m}^3$ . This value is significantly below the Community Action Level of  $7 \times 10^{-9}$   $\text{mg}/\text{m}^3$  listed in Appendix E of the 2006 Response Plan, and thus dioxin/furan sampling was not conducted.

#### **DTSC response to Comments #6 through #14**

The draft Addendum has been reviewed by DTSC, the U.S. Environmental Protection Agency (U.S. EPA), the California Environmental Protection Agency (Cal/EPA), and the South Coast Air Quality Management District (SCAQMD) and has incorporated all agency concerns. Therefore, DTSC respectfully disagrees with the statements made in comments #6, #7, #8, #11, #12 and #13.

In response to comment #9, during the environmental investigations that took place under DTSC's oversight prior to the clean-up, soil, soil gas, groundwater and sediment samples were collected and analyzed for various contaminants including, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polynuclear compounds (PAHs), chlorinated pesticides, organophosphorous pesticides, herbicides, total petroleum hydrocarbons, explosive analytes (perchlorate, NDMA, nitroaromatics and nitramines), Title 22 metals including arsenic, and dioxins and furans. An analysis of the data by DTSC indicated that PCBs were the primary constituent of concern. In September of 2015, in addition to PCBs, samples were also collected and analyzed for dioxin/furans, Title 22 metals and

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perchlorate. The previous determination that PCBs were the primary chemicals of concern was reconfirmed by both DTSC and EPA.

Regarding comments #10 and #14, please note that health-based exposure levels for PCBs and corresponding dust concentration limits were derived to be protective for the surrounding community, as presented in Appendix E of the 2006 Response Plan and the current Air Monitoring Plan Addendum, and summarized in the responses to Comments #1-5 above.

Do not hesitate to contact me at (714) 484-5459 or e-mail [peter.garcia@dtsc.ca.gov](mailto:peter.garcia@dtsc.ca.gov) if you have any questions.

Sincerely,



Peter Garcia  
Branch Chief  
Department of Toxic Substances Control

Enclosures

June 16 Letter from CCAEJ and Attachment

cc: w/ Enclosure

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*\*Title for Identification Purposes only*

**Center for Community Action and Environmental Justice**

*Centro de Acción Comunitaria y Justicia Ambiental*

June 16, 2016

Stacey Lear  
State of California  
Department of Toxic Substances Control  
1001 "I" Street  
Sacramento, CA 92512

RE: Comments and concerns regarding air monitoring at the Ag Park Site in Riverside, CA

Dear Ms. Lear:

Please find attached comments concerning the workplan and air monitoring for the third attempt at cleaning up the Ag Park site in Riverside, California. I would like to emphasize the sensitive nature of this site and the need to go above and beyond the usual approach to a cleanup in order to rebuild public confidence in this site activities. The unfortunate history of this site demands more care and extra measures be taken to ensure the health and well-being of nearby families are protected.

Residents living around the Ag Park property have endured several years of exposure to PCBs and other contaminants as a result of work conducted at the Ag Park site. On many occasions they reported heavy clouds of dust coming off the site and piles of contaminated dirt stockpiled next to their homes. Throughout that clean-up process they did not receive attention to the concerns they raised. The only phone number to call during this work was the contractors' number who upon receiving calls dismissed them. Calls to AQMD got a similar response leaving residents to fend for themselves.

Last year DTSC conducted confirmation sampling with split samples from EPA that uncovered elevated levels of PCBs prompting this additional mitigation work. Because the Department's credibility is in question, there is a heightened need to demonstrate that the number one priority for DTSC is the safety and well-being of the local residents. We will never have closure on this site until DTSC can demonstrate its competency. That means you must go above and beyond your normal approach and protocol to publicly demonstrate your ability to protect the residents.

Two items are of particular concern and need to be highlighted in order to show that commitment – 1) the dust action level of 7ug/m3 must remain. In the 2006 workplan you used the 7ug/m3 as the indicator of a safe level for dust. In this air monitoring plan you have used a convoluted formula (that residents do not understand) to justify a higher dust action level (50 ug/m3). Since the 7ug/m3 was



used the first time and didn't protect people, it is difficult to understand how raising the action level will be more protective! It makes no sense and is not apparent to local residents why you would set a higher level of exposure when the lower level didn't protect them. 2) The number of air monitors around the site are at best minimal. There needs to be more monitors around the site given the size of the site; the multi-directionality of the wind; and the need to demonstrate concern for the residents and that you are taking every step to protect them. The monitors need to be very visible and surround the site.

DTSC has a very big public credibility issue. The only way to address it and build confidence in your work is to go above and beyond.

We ask that you seriously consider our comments and incorporate them into the workplan. We understand that your staff have been criticized on many levels in recent years which is difficult for any person and especially for professionals. We offer these comments in an honest attempt to help you succeed. When you do things the correct way, you protect the residents and that is our only goal.

Please do not hesitate to call if you have questions or wish to discuss our comments.

Best,



Penny J. Newman  
Executive Director

MEMO To: DTSC and Work Group Members  
Date: June 16<sup>th</sup>, 2016  
RE: CCAEJ Air Monitoring Comments  
by CCAEJ Scientists (Bruce Bailey & Scott Simpson)

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1. The dust action level of 7 ug/m3 is the **approved** level by DTSC for both phase 1 and 2 of the cleanup which makes it legally binding ( see page 7 of the AdvancedGeo Environmental, Inc. Air Monitoring Workplan dated Oct., 2005). The 7 ug/m3 action level is stated on the bottom of both phase 1 and phase 2 dust monitoring log sheets.
2. Your calculations after the fact and unfounded have no legal basis and does not excuse DTSC from enforcing the only approved legal action level. First you made the huge assumption that the PM10 PCB action level has a linear relationship to the site PCB soil concentrations, this is unfounded and has no factual basis in the fundamentals of soil chemistry principles of absorption and Van der Waals forces. The small PM10 particles have a fraction of the adsorption capacity as larger soil particles and since the site is mainly comprised of particles over 10 microns this invalidates the comparison. Also, the PM10 particles are composed of different types of media such as clay, sand, organic matter and each has a different PCB adsorption capacity. Since the PM10 PCB capacity would be saturated at extremely low levels, the 7ug/m3 should stand throughout the project.
3. It also appears that you failed to review the phase 1 and phase 2 dust monitoring logs that clearly show that the dust levels were well above the 7ug/m3 for many hours over many days without any work stoppage or corrective action taken.
4. The legally binding approved Geo Environmental Workplan(page 7) states that section 25323 of the California Health and Safety Code requires that personal monitoring for airborne concentrations of toxic contaminants be conducted at regular intervals during the excavation; this indicates that each worker onsite should have been fitted with a sample cassettes. Please provide the PCB lab analysis for the workers. The workplan also states that the NIOSH Method 5503 is being used for monitoring downwind of the daily excavation; **first NIOSH 5503 is only appropriate for a workers breathing zone and when modified indoor air sampling** and would not provide valid results for outdoor air sampling. **Federal EPA document( EPA-600-4-78-048, August/1987) A Method for Sampling and Analysis of PCBs in Ambient Air details the need for sampling large volumes of air and details the accepted method for PCB sampling of outdoor air.**

NOTE: air sampling for PCB should have been performed on opposite sides of the project since the wind changes at routine times of the day. Please address this issue.

Also, the action level set for the PCB air samples was .00007mg/m3 but the lab had lab reporting limit varied from .00010mg/m3 to .00038mg/m3 therefore action level would not be detected.

5. The legally binding approved Workplan also states that the sampling would be .conducted daily during the first two weeks of the excavation and if the action level was not exceeded PCB monitoring would be reduced to twice weekly. I only received lab analysis for two weeks for both phase 1 and phase 2, please provide this documentation. The legally binding workplan indicates that dioxin(TCDD) with a Maximum soil concentration of 3.85E-04mg/kg had an action level of 7E-09mg/m3 and therefore should have 8hr. samples taken. Please provide the lab analysis or a detailed explanation of why this wasn't done.

6. The plan is incomplete and avoids the primary issues of concern.
7. The stated goals of the plan are mis-directed away from regulatory requirements.
8. The plan does not protect public health and the environment there for; it does not meet Public Policy and cannot minimize DTSC liability. The submitted plan continues to lend support to the misapplication of RCRA, TOSCA and CERCLA requirements at this site. The regulatory agencies must implement the new "Brown Field" legislation in harmony with existing Public Policy (FEDERAL and STATE). Existing Public Policy is directing DTSC to protect public health and the environment and to protect water quality (non-degradation policy) and to reduce air emissions at the site. However, the Brown Fields program dismisses public policy to make money at the expense of Public Health and the Environment.
9. The Plan does not attempt to capture and test for the other hazardous constituents known at the site. (metals,dioxins, furans, organics).
10. Mis-classification of wastes at the site allows the concept of low concentrations in soil to be dismissed from regulatory control. Materials found at this site are listed RCRA wastes. Therefore, the soil must be cleaned to ND to meet public policy. When a HW is disposed or otherwise placed into an environmental media it undergoes Dilution into the media. In this case, soil. To clean up the listed waste in soil, all of it must be removed to method ND. OR, seek a RCRA landfill closure permit leaving waste onsite with monitoring and deed restrictions. Or, pursue de-listing of the waste(s) left at the site. RCRA listed wastes are not allowed to migrate from the site as dust or other air emission. Health Risk levels are not considered except under OSHA worker exposure protection.
11. Dust crossing the property line (contaminated or not) is illegal trespass. DTSC is in control of the site activities and thus liable for damages from illegal trespass. The dust is RCRA listed waste derived from the disturbance of contaminated soil (the "Derived From Rule"). Vehicles and equipment cannot drag out contaminated soil from the site as well. Any dust or soil leaving the site demands a "stop work" response until corrective measures end the trespass. A cleanup of the trespass must ensue promptly.
12. The Plan is vague and does not discuss the appropriate application of low vs. high volume air sampling. Nor does it appropriately select high or low volume sampling for the appropriate reasons. We are not sampling for just PCB in dust. To select one method may artificially produce little or no detection(s) of the various hazardous waste constituents known at the site.
13. The plan focusses on detecting PCB in dust. The regulatory presumption is the soil is contaminated there for; any dust crossing the property line is the equivalent of a "Release to the environment". The preferred selection of air monitoring technique that provides a "quick PCB detection result" vs the laboratory method is inappropriate and creates a situation ripe for manipulation of the air monitoring findings. The proper rationale for technique selection is to focus on detecting any downwind dust at the property line and secondarily laboratory dust analysis for HW constituents per SW846.
14. The Plan does not discuss how similar or dis-similar it is to OSHA worker protection requirements. OSHA is the only public policy with risk-based exposure standards. OSHA does not apply to off-site property or members of the public exposed to work place hazards. DTSC employs Risk-Based exposure limits at this project to ensure profits are made when houses are built upon contaminated property.